

What is claimed is:

1. A gain control circuit comprising:  
a variable gain circuit having a predetermined gain control range; and  
a control voltage supply circuit for supplying an internal control voltage  
5 to said variable gain circuit as a gain control signal, wherein

said control voltage supply circuit generates said internal control voltage  
in response to an external control voltage as to compensate a linearity of said  
variable gain circuit to an extent of the external control voltage where said  
variable gain circuit loses a linearity.

2. The gain control circuit as claimed in Claim 1, wherein  
said control voltage supply circuit generates said internal control voltage  
varying in linear as against said external control voltage in voltage ranges from a  
first reference voltage to a second reference voltage, and

15 a changing ratio of said internal control voltage is set to be larger than a  
changing ratio of at least in the voltage range that is less than the first reference  
voltage and the voltage range that is greater than the second reference voltage.

3. The gain control circuit as claimed in Claim 1, wherein  
20 more than one of said variable gain circuits are connected in cascade  
connection.

4. A radio communication apparatus having an amplification means in a  
transmitting stage for amplifying an intermediate frequency signal and  
25 supplying said intermediate frequency signal to a mixing circuit, in which

said amplification means comprising:  
a variable gain circuit having a predetermined gain control range; and  
a control voltage supply circuit for supplying an internal control voltage  
to said variable gain circuit as a gain control signal, wherein

said control voltage supply circuit generates said internal control voltage in response to an external control voltage as to compensate a linearity of said variable gain circuit to an extent of the external control voltage where said variable gain circuit loses a linearity.

5  
5. The radio communication apparatus as claimed in Claim 4, wherein  
the control voltage supply circuit generates the internal control voltage  
varying in linear as against the external control voltage in voltage ranges from a  
first reference voltage to the second reference voltage, and

10 a changing ratio of said internal control voltage is set to be larger than a  
changing ratio of at least in the voltage range that is less than the first reference  
voltage and the voltage range that is greater than the second reference voltage.

15 6. The radio communication apparatus as claimed in Claim 4, wherein  
more than one of said variable gain circuits are connected in cascade connection.